



ATTORNEY DOCKET No.: 0079571-0110 (BU04-17 US)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: J. Porco, *et al.*
Serial No.: 10/593,502
Filing Date: September 20, 2006
Title: Synthesis of Rocaglamide Natural Products via Photochemical Generation of Oxidopyrylium Species

Examiner: To be assigned

Group Art Unit: To be assigned

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

TRANSMITTAL LETTER

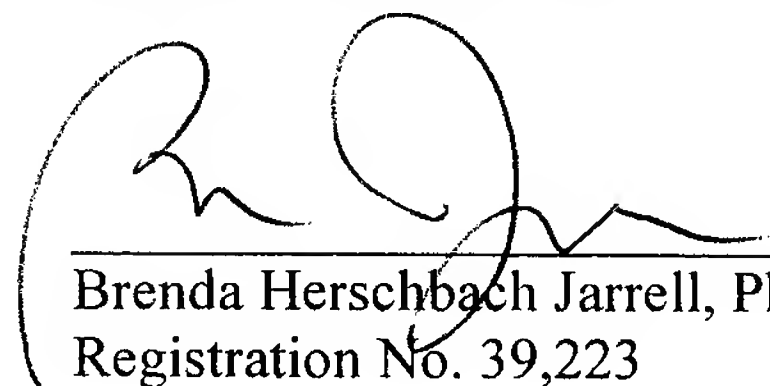
Enclosed are the following documents:

1. Form PTO-1449 (4 pages);
2. Information Disclosure Statement (6 pages);
3. Cited Art (45); and
4. Return Postcard.

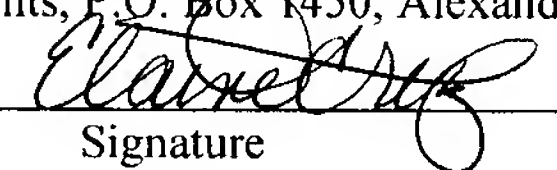
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Respectfully submitted,

Dated: May 22, 2007


Brenda Herschbach Jarrell, Ph.D.
Registration No. 39,223

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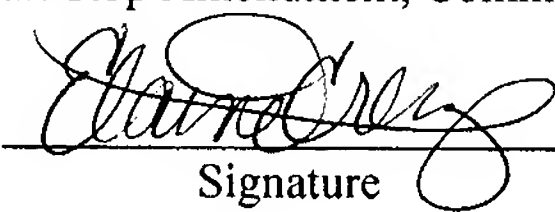


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May 22, 2007 Date	 Signature
Elaine Cruz _____ Typed or Printed Name of person signing certificate	

Sir:

**STATEMENT FILED PURSUANT TO THE
DUTY OF DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, Applicant requests consideration of this Information Disclosure Statement.

Type of Statement

The present Information Disclosure Statement is:

- ☒ An *original* Information Disclosure Statement; or
- ☐ A *supplemental* Information Disclosure Statement.

Compliance with 37 CFR § 1.97

The present Information Disclosure Statement is being filed:

- ☒ Pursuant to 37 CFR § 1.97(b); no fee or certification is required:
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application;
 - ☒ Before the mailing of a first Office action on the merits; or
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under § 1.114.
- ☐ Pursuant to 37 CFR § 1.97(c) after the dates listed above but before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application; Applicant hereby *either*:
- ☐ Certifies that *either*:
 - ☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
 - ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the

knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.; or

☐ Includes herewith the fee set forth in § 1.17(p).

☐ Pursuant to 37 CFR § 1.97(d), after the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application; Applicant hereby *both*:

☐ Certifies that *either*:

☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.; and

Content of the Information Disclosure Statement

Applicant hereby makes of record in the above-identified application the reference(s) listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

Applicant includes copies of references as indicated below:

- ☒ A copy of each cited reference not indicated with a * is included;
- ☐ Copies of references indicated with a † on the attached form PTO-1449 are not included pursuant to 37 CFR § 1.98(d) because they were previously provided/cited to the United States Patent Office in an Information Disclosure Statement that complies with 37 CFR § 1.98(a)-(c) and was submitted in the following patent application that is relied upon in the present case for an earlier effective filing date under 35 USC § 120:
- ☐ Copies of English translations of one or more non-English references are included.

Applicant hereby makes the following additional information of record in the above-identified application:

Applicant certifies that the Information Disclosure Statement *either*:

- ☒ Does not contain non-English language citations;
- ☐ Does contain non-English language citations, of which an English language translation of the Abstract for each is provided herein:
- ☐ Includes one or more translations of a non-English citation.

Remarks

The submission of this Information Disclosure Statement should not be construed as a representation that a search has been made.

The submission of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b) .

The submission of this Information Disclosure Statement shall not be construed as a representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

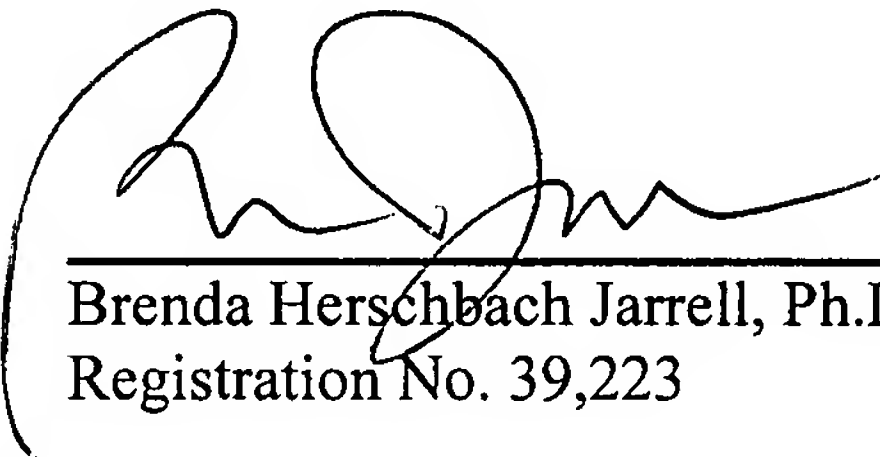
It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited patent(s) and publication(s) has (have) been fully considered by the Patent and Trademark Office during the examination of this application; and
3. The citations for the patent(s) and publication(s) be printed on any patent which issues from this application.

Notwithstanding any statements by Applicants, the Examiner is urged to form his or her own conclusions regarding the relevance of the cited reference(s).

Respectfully submitted,

Dated: May 22, 2007



Brenda Herschbach Jarrell, Ph.D.
Registration No. 39,223

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PATENT GROUP
Two International Place
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Form PTO-1449 (REV. 8-83) INFORMATION DISCLOSURE STATEMENT <i>(Use several sheets if necessary)</i>		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket 0079571-0110	In re Application No. 10/593,502
				Applicant: Porco, <i>et al.</i>	
				Filing Date: September 20, 2006	Group: NYA
U.S. PATENT DOCUMENTS					
Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
U.S. PATENT APPLICATIONS					
Examiner's Initials:	Serial Number:	Applicant:	Filing Date:	Group:	Art Unit:
FOREIGN PATENT DOCUMENTS					
Examiner's Initials	Document No.	Country	International Publication Date	Translation	
				Yes	No
OTHER DOCUMENTS					
Examiner's Initials	Citation (Including Author, Title, Date, Pertinent Pages, Etc.)				
	Bacher <i>et al.</i> , "Thapsakins: possible biogenetic intermediates towards insecticidal cyclopenta[b]benzofurans from <i>Aglaia edulis</i> ", <i>Phytochemistry</i> , 1999 , 52: 253-263				
	Bader <i>et al.</i> , "Proton transfer in 3-hydroxylavone studied by high-resolution 10 K laser-excited Shpol'skii spectroscopy", <i>J. Phys. Chem. A</i> , 2002 , 106: 2844-2849				
	Baer, "Oxidative Cleavage of α -Keto Acids and α -Keto Alcohols by Means of Lead Tetraacetate", <i>J. Chem. Soc.</i> , 1940 , 62: 1597-1606				
	Baldwin <i>et al.</i> , "Expedient synthesis of a highly substituted tropolone via a 3-oxidopyrylium [5+2] cycloaddition reaction", <i>Tetrahedron Lett.</i> , 2003 ; 44: 4543-4545				
	Baumann <i>et al.</i> , "Inducible Expression and Phosphorylation of Coactivator BOB.1/OBF.1 in T Cells", <i>J. Biol. Chem.</i> , 2002 , 277: 44791-44800				
	Bohnenstengel <i>et al.</i> , "Structure activity relationships of antiproliferative rocaglamide derivatives from <i>Aglaia</i> species (Meliaceae)", <i>Z. Naturforsch. [C]</i> , 1999 , 54: 55-60				
	Bohnenstengel <i>et al.</i> , "1H-cyclopenta[b]benzofuran lignans from <i>Aglaia</i> species inhibit cell proliferation and alter cell cycle distribution in human monocytic leukemia cell lines", <i>Z. Naturforsch. [C]</i> , 1999 , 54: 1075-1083				
	Chou, "The host/guest type of excited-state proton transfer: a general review", <i>J. Chin. Chem. Soc.</i> , 2001, 48: 651-682				
	Cui <i>et al.</i> , "Novel Cytotoxic 1H-Cyclopenta[b]Benzofuran Lignans from <i>Aglaia Elliptica</i> ", <i>Tetrahedron</i> , 1997 , 53: 17625-17632				
	Crout and Rathbone, "Catalysis Di-n-butyltin Oxide of a Tertiary Ketol Rearrangement:				

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	Synthesis of Intermediates and Analogues of Valine and Isoleucine Biosynthesis", <i>J. Chem. Soc. Chem. Commun.</i> , 1987 , 290-291		
	Creary <i>et al.</i> , "Diels-Alder approach to bicyclic .alpha.-hydroxy ketones. Facile ketol rearrangements of strained .alpha.-hydroxy ketones", <i>J. Org. Chem.</i> , 1985 , 50: 1932-1938		
	Dumontet <i>et al.</i> , "New nitrogenous and aromatic derivatives from <i>Aglaia argentwa</i> and <i>A. forbesii</i> ", <i>Tetrahedron</i> , 1996 , 52: 6931-6942		
	Fahrig <i>et al.</i> , "A Synthetic Derivative of the Natural Product Rocaglaol Is a Potent Inhibitor of Cytokine-Mediated Signaling and Shows Neuroprotective Activity in Vitro and in Animal Models of Parkinson's Disease and Traumatic Brain Injury", <i>Mol. Pharmacol.</i> , 2005 , 67: 1544-1555.		
	Gerard <i>et al.</i> , "A Biomimetic Approach to the Rocaglamides Employing Photogeneration of Oxidopyryliums Derived from 3-Hydroxyflavones", <i>J. Am. Chem. Soc.</i> , 2004 , 126: 13620-13621		
	Hailes <i>et al.</i> , "A biomimetic approach to the synthesis of rocaglamide based on a photochemical [2+2] cycloaddition of a cinnamate unit to a flavone", <i>Tetrahedron Lett.</i> , 1993 , 34: 5313-5316		
	Hausott <i>et al.</i> , "Flavaglines: A group of efficient growth inhibitors block cell cycle progression and induce apoptosis in colorectal cancer cells", <i>Int. J. Cancer</i> , 2004 , 109: 933-940		
	Hendrickson and Farina, "A new 7-ring cycloaddition reaction", <i>J. Org. Chem.</i> , 1980 , 45: 3359-3361		
	Hwang <i>et al.</i> , "Silvestrol and Episilvestrol, Potential Anticancer Rocaglate Derivatives from <i>Aglaia silvestris</i> ", <i>J. Org. Chem.</i> , 2004 , 69: 3350-3358		
	Itoh, "Fluorescence studies of the excited-state proton transfer in substituted 3-hydroxychromones in supersonic jet", <i>Pure and Applied Chemistry</i> , 1993 , 65: 1629-1634		
	Ishibashi <i>et al.</i> , "Insecticidal 1H-Cyclopentatetrahydro[b]Benzofurans from <i>Aglaia Odorata</i> ", <i>Phytochemistry</i> , 1993 , 32: 307-310		
	Kasha, "Proton-transfer spectroscopy. Perturbation of the tautomerization potential", <i>J. Chem. Soc. Faraday Trans. 2</i> , 1986 , 82: 2379-2392		
	King <i>et al.</i> , "X-Ray Crystal Structure of Rocaglamide, a Novel Antileukemic 1H-Cyclopenta[b]benzofuran from <i>Aglaia elliptifolia</i> ", <i>J. Chem. Soc., Chem. Commun.</i> , 1982 , 1150-1151		
	Klymchenko <i>et al.</i> , "3-Hydroxychromone dyes exhibiting excited-state intramolecular proton transfer in water with efficient two-band fluorescence", <i>New J. Chem.</i> , 2004 , 28: 687-692		
	Klymchenko, "Elimination of hydrogen bonding effect on solvatochromism of 3-hydroxyflavones", <i>J. Phys. Chem. A</i> , 2003 , 107: 4211-4216		
	Kraus and Sy, "A synthetic approach to rocaglamide via reductive cyclization of .delta.-keto nitriles", <i>J. Org. Chem.</i> , 1989 , 54: 77-83		
	Kumar <i>et al.</i> , "Intramolecular excited-state proton-transfer studies on flavones in different environments", <i>Spectrochim. Acta, Part A</i> , 2001 , 57: 299-308		

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	Laermer <i>et al.</i> , "Femtosecond spectroscopy of excited-state proton transfer in 2-(2'-hydroxyphenyl)benzothiazole", <i>Chem. Phys. Lett.</i> , 1988 , 148: 119-124		
	Lee <i>et al.</i> , "Cytostatic mechanism and antitumor potential of novel 1H-cyclopenta[b]benzofuran lignans isolated from <i>Aglaia elliptica</i> ", <i>Chem. Biol. Interact.</i> , 1998 , 115: 215-228		
	Lee and Wu, "Total Synthesis of Kaempferol and Methylated Kaempferol Derivatives", <i>J. Chin. Chem. Soc.</i> , 2001, 48: 201-206		
	Lui <i>et al.</i> , "A general protocol for the hydroxylation of C-14 in gibberellins: synthesis of 14 β -hydroxy-GA ₁ methyl ester", <i>Tetrahedron</i> , 1998 , 54: 11637-11650		
	Mandal <i>et al.</i> , "Evidence of ground-state proton-transfer reaction of 3-hydroxyflavone in neutral alcoholic solvents", <i>J. Phys. Chem. A</i> , 2003; 107: 6334-6339		
	Matsuura and Takemo, "Photoinduced reactions. 61. Photorearrangement of 3-hydroxyflavones to 3-aryl-3-hydroxy-1,2-indandiones", <i>Tetrahedron</i> , 1973 , 3337-3340		
	Ohse <i>et al.</i> , "Cyclopentabenzofuran Lignan Protein Synthesis Inhibitors from <i>Aglaia odorata</i> ", <i>J. Nat. Prod.</i> , 1996 , 650-652		
	Paquette and Hofferberth, "Effect of 9,10-cyclic acetal stereochemistry on feasible operation of the alpha-ketol rearrangement in highly functionalized paclitaxel (Taxol) precursors", <i>J. Org. Chem.</i> , 2003 , 68: 2266-2275		
	Proksch <i>et al.</i> , "Chemistry and biological activity of rocaglamide derivatives and related compounds in <i>Aglaia</i> species (Meliaceae)", <i>Curr. Org. Chem.</i> , 2001 , 5: 923-938		
	Piers <i>et al.</i> , "Sequential anionic 1,3-ester shifts and intramolecular stille couplings: a new protocol for the concise assembly of functionalized polycyclic dienes", <i>Synlett.</i> , 1999 , 7: 1082-1084		
	Roschal <i>et al.</i> , "Flavonols and Crown-Flavonols as Metal Cation Chelators. The Different Nature of Ba ²⁺ and Mg ²⁺ Complexes", <i>J. Phys. Chem. A</i> , 1998, 102: 5907-5914		
	Sammes <i>et al.</i> , "The preparation and some reactions of 3-oxidopyrylium", <i>J. Chem. Soc. Perkin Trans. I</i> , 1983 , 1261-1265		
	Schwartz <i>et al.</i> , "Direct observation of fast proton transfer: femtosecond photophysics of 3-hydroxyflavone", <i>J. Phys. Chem.</i> , 1992 , 96: 3591-3598		
	Shipman <i>et al.</i> , "Synthesis of 1,3,2-dioxathiolane-4-methylene-2-oxides: Potential allene oxide equivalents", <i>Tetrahedron</i> , 1999 , 55: 10845-10850		
	Tamaki <i>et al.</i> , "Syntheses of (-)-(7S)- and (+)-(7R)-K252a dimers", <i>Tetrahedron Lett.</i> , 2002 , 43: 379-382		
	Tanaka <i>et al.</i> , "Synthesis of flavonol derivatives as probes of biological processes", <i>Tetrahedron Lett.</i> , 2000 , 41: 9735-9739		
	Trost <i>et al.</i> , "An unusual oxidative cyclization. A synthesis and absolute stereochemical assignment of (-)-rocaglamide", <i>J. Am. Chem. Soc.</i> , 1990 , 112: 9022-9024		
	Wender <i>et al.</i> , "The First Synthesis of a Daphnane Diterpene: The Enantiocontrolled Total		

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				Synthesis of (+)-Resiniferatoxin", <i>J. Am. Chem. Soc.</i> , 1997 , 119: 12976-12977	
.		Wu <i>et al.</i> , "Cytotoxic and antiplatelet aggregation principles from <i>Aglaia elliptifolia</i> ", <i>J. Nat. Prod.</i> , 1997 , 60: 606-608			
EXAMINER				DATE CONSIDERED	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to t applicant.					